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**Ex Parte via Electronic Filing**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: *Basic Service Tier Encryption; Compatibility Between Cable  
Systems and Consumer Electronics Equipment,*  
MB Dkt. No. 11-169, PP Dkt. No. 00-67

Dear Ms. Dortch:

On July 26, 2012, the undersigned and Alan Fishel of Arent Fox LLP spoke via conference call regarding the above-referenced rulemaking with Bill Lake, Chief, Media Bureau; Lyle Elder, Attorney-Advisor to Chairman Genachowski; Royce Sherlock, Attorney-Advisor, Office of General Counsel; and the following members of the Media Bureau: Nancy Murphy, Associate Chief; Michelle Carey, Deputy Chief, Alison Neplokh, Chief Engineer; Mary Beth Murphy, Chief, Policy Division; Steven Broeckaert, Senior Deputy Chief, Policy Division, and Brendan Murray, Attorney Advisor. On that call, we responded to the commitments made by the six largest cable operators in a letter to Chairman Genachowski (the "Operator Commitments").<sup>1</sup>

We expressed that while Boxee is pleased that the six largest incumbent operators are now willing to take measures to continue enabling consumers' third-party CE devices to access basic tier programming in encrypted all-digital systems, the Operator Commitments fall short of being a comparable successor to ClearQAM for the reasons outlined below. In particular, the Operator Commitments:

- Lack any requirement that any long-term solution for delivering the basic tier be hardware-free, and
- Lack any obligation for operators other than the six largest to enable their subscribers to access the basic tier third-party devices.

Hardware-based methods of delivering access to the basic tier should be limited to short-term use, because they impose burdens of time, expense, and inconvenience

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<sup>1</sup> See Letter from Michael K. Powell, President and CEO, NCTA, to Hon. Julius Genachowski, Chairman, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67 (July 25, 2012) (the "NCTA Letter").

on consumers; these burdens are increased when multiple, inconsistent hardware-based options are used.

In order to protect consumers' ability to continue accessing the basic tier via devices of their choosing (as they can currently do using ClearQAM), a basic tier encryption Order should require that encrypting operators provide a long-term solution for accessing the basic tier on non-operator provided devices that is:

- hardware-free (i.e., uses embedded DTA security or IP delivery with non-proprietary, non-discriminatory security); and
- required of all operators, but contemplates approval of additional long-term solutions, to accommodate operators not yet ready to commit to one solution as well as advances in technology.

As described at the end of this letter, an Order that approves encryption contingent upon compliance with the solution previously suggested by Boxee and Comcast,<sup>2</sup> while permitting operators to petition for approval of other hardware-free solutions, would sufficiently protect consumers' ability to choose to access the basic tier on non-operator provided devices.

#### **I. The Operator Commitments do not provide a comparable successor to unencrypted basic cable.**

The Operator Commitments fall short of a sufficient solution for delivering the basic tier in encrypted systems for the following reasons:

- **A sufficient long-term solution for encryption must be hardware-free.** The Operator Commitments would permit an operator to encrypt if it provides either a hardware-based option ("Option 1" of the Operator Commitments) or a hardware-free option ("Option 2" of the Operator Commitments).<sup>3</sup> However, a hardware-based option should be limited to use as in interim solution, because it cannot provide consumers with the low-cost and simple "plug-and-play" experience of ClearQAM. With ClearQAM, a basic-tier subscriber can purchase a third-party device at retail and use it right away after bringing it home and connecting it to the coaxial cable feed in the house, without renting additional hardware from the cable operator – a hardware-free successor to ClearQAM, such as embedded DTA technology or direct IP delivery, would offer these same conveniences. In contrast, with a hardware-based method, consumers will be burdened with:

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<sup>2</sup> See Letter from Jonathan Friedman, Counsel for Comcast Corporation, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67 (June 27, 2012).

<sup>3</sup> See NCTA Letter at 2. We note that Option 1 of the Operator Commitments includes the use of integrated DTA technology, which is actually a hardware-free solution, and not subject to the comments set forth above regarding the use of other Option 1 hardware-based solutions.

- Delays before being able to use a device purchased at retail, caused by the need to obtain the operator-provided hardware (either by calling and having it shipped to them for self-installation or by scheduling an install appointment);
- Complex set-up process needed to connect the operator-provided hardware to the cable feed and the third-party device;
- Inconvenience of relying upon the cable operator to trouble-shoot the set-up process, especially if an in-home appointment is needed, and thus being exposed to the numerous frustrations experienced by consumers attempting to use CableCARDS in third-party devices<sup>4</sup>; and
- Monthly rental fees for the operator-provided hardware (to the extent the user does not fall within the narrowly drawn categories for free transitional relief set forth in the NPRM for this proceeding<sup>5</sup>).

While an E-DTA as jointly proposed by Boxee and Comcast offers an expedient option for balancing operators' desire to encrypt as soon as possible with consumers' and device makers' needs to continue accessing the basic tier, the inherent limitations of hardware-based solutions means they should only be permitted as interim measures to bridge the gap between the start of encryption and the availability of hardware-free successors to ClearQAM.

- **Hardware-free solutions must meet requirements guaranteeing a ClearQAM-like experience.** To the extent that an operator elects a hardware-free option under Option 2 of the Operator Commitments, the only requirement placed on such solution is that it use "commercially available security technology that is licensable on a non-discriminatory basis to manufacturers of [third-party] retail devices."<sup>6</sup> While Boxee agrees with this requirement, in order to ensure a comparable experience to ClearQAM, any additional (i.e., beyond embedded DTA security) hardware-free solution must also:
  - Deliver basic tier programming as it airs (not just as video-on-demand or similar services);
  - Not require any operator-provided hardware or features implemented in a third-party device on the hardware level;

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<sup>4</sup> See, e.g., Letter from Melissa Marks, General Counsel, Boxee, Inc., to Marlene H. Dortch, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67 (Feb. 2, 2012) and attachment thereto.

<sup>5</sup> See *infra*, note 13, regarding the scope of the eligibility categories for transitional relief.

<sup>6</sup> See NCTA letter at 2.

- Not require any delivery, security, or other standards proprietary to or requiring certification by the cable operator;
  - Allow channel discovery and control via an industry-standard protocol that commercially available on non-discriminatory license terms and not proprietary to operator;
  - Not restrict the copying of basic tier content beyond what is currently allowed by FCC regulations for broadcast and unencrypted content; and
  - Be available to all of the operator's basic tier subscribers within an encrypted system who have an internet connection, regardless of whether the cable operator is also such subscriber's internet service provider.<sup>7</sup>
- **To the extent hardware-based solutions are permitted, they must provide a simple set-up experience for consumers and advance release of materials necessary for development.** While an E-DTA as jointly proposed by Boxee and Comcast would provide a relatively straightforward and inexpensive interim solution, the Operator Commitments permit the use of additional hardware-based options, for which the same is not likely true. The rental cost of DTAs is lower than that of other operator-provided set-top boxes; therefore if operators can comply by providing hardware other than E-DTAs, consumers not within the transitional relief categories and/or following the transitional relief periods will be forced to pay higher rental costs in order to access the basic tier. Additionally, introducing additional hardware-based solutions increases the likely complexity of set-up for the consumer and the need to rely on the operator, rather than the third-party device manufacturer, for trouble-shooting.<sup>8</sup> In any case, to the extent that hardware-based solutions are permitted, it is necessary that operators provide advance availability of documentation regarding the DNLA protocols used by such solution and development units of hardware, so that third-party

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<sup>7</sup> We believe that HTTPS client authentication may be used for authenticating clients that are connected over the internet, through a provisioning phase in which the client's (unique) certificate is registered with the operator, so that the operator will be in full control of which clients are viewing its content.

<sup>8</sup> Whereas third-party device makers would be familiar with the consistent E-DTA technology, they are less likely to have such expertise about multiple set-top boxes with inconsistent processes for set-up and connection to the home network, which means that consumers would be forced to rely on the operator's customer service to do this, with the attendant frustrations of long wait times and inconvenient installation appointments.

device makers can develop and test that their products properly support such operated-provided hardware.<sup>9</sup>

- **An operator's compliance with permitted solutions must be an enforceable prior condition to encryption.** The NCTA Letter does not specify in what way the Operator Commitments would be included or referenced in a basic tier encryption Order. In order for consumers and third-party device makers to have certainty regarding the enforceability of the Operator Commitments, the text of any such Order should explicitly state that compliance with the permitted solutions is a pre-condition to an operator being permitted to encrypt pursuant to the Order.
- **All operators should be subject to compliance with permitted solutions.** The NCTA Letter explicitly excludes from compliance with the Operator Commitments all operators other than the six largest incumbent operators. Yet there is no public policy basis for preventing consumers in encrypted systems of smaller operators from being able to access the basic tier on third-party devices, simply because of where they live. An Order that applies to all operators, but permits operators to propose solutions for accessing the basic tier that are workable for them when they are ready to begin encryption more fairly balances the needs of smaller operators with those of the consumers within their systems.

## **II. An Order approving the Boxee-Comcast proposal while permitting additional hardware-free solutions fairly balances the interests of all parties.**

The above shortcomings of the Operator Commitments would be resolved by a basic tier encryption Order that permits an operator to encrypt the basic tier in its all-digital systems by complying either with the Boxee-Comcast proposed solution or with another hardware-free solution proposed by the operator and approved by an expedited petition process.<sup>10</sup> One possible framework for such an Order is suggested in Appendix A to this letter. Such a framework recognizes that not all operators may be ready to encrypt at this time and may not be prepared to commit to using the Boxee-Comcast proposed solution when they do so, while ensuring that

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<sup>9</sup> The Operator Commitments include three-month advance access requirements for hardware-free solutions (See NCTA Letter at 2), but lack the same for a hardware-based solution, which are necessary to the extent hardware-based solutions are permitted by the Commission.

<sup>10</sup> The Commission has adopted similar procedures in other contexts. See, e.g., 47 CFR §76.1905 (setting forth petition process for seeking approval to encode a new service in a manner different from the encoding rules set forth in the adopted CCI regulation); *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Second Report and Order, 14 FCC Rcd 10954 (1999) (approving three methods for 911 call completion by analog cellular phones, while "stand[ing] ready to take the necessary steps to implement" new or improved methods in the future.)

if and when they do encrypt, consumers within their systems will be provided with a comparable successor to ClearQAM. It also accommodates the “ever-changing state of technology . . . in today’s video marketplace”<sup>11</sup> recognized in the NCTA letter and Cablevision’s observation that “[t]he approach to encryption must be compatible with the changing form of video delivery by cable operators,”<sup>12</sup> by leaving the door open for additional hardware-free solutions to be approved in the future.

Boxee urges the Commission to move forward with a basic tier encryption Order that fairly balances the needs of cable operators with those of makers and consumers of third-party devices, and offers the framework in Appendix A as one method of doing so based upon the Boxee-Comcast proposed solution. However, to the extent that the Commission should move forward with an Order not based on the Appendix A framework or that otherwise does not completely incorporate the points set forth in the first Part I of this letter, Boxee respectfully requests that the Commission include in the Order a Further Notice of Proposed Rulemaking requesting comments on such points. In particular, if not included in the conditions of the Order, the Commission should request further comment on the relative costs and benefits to operators, consumers, and third-party device makers of requiring (i) that long-term solutions for accessing the encrypted basic tier be hardware-free, and (ii) that all cable operators be subject to such requirements.<sup>13</sup>

Pursuant to the Commission’s rules, this notice is being filed in the above-referenced dockets for inclusion in the public record.

Respectfully Submitted,

/s/ Melissa Marks

Melissa Marks  
General Counsel

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<sup>11</sup> See NCTA Letter at 2.

<sup>12</sup> See Letter from Michael Olsen, Cablevision, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67 (June 29, 2012) at 1.

<sup>13</sup> A future Second Order that required, based on additional comments, that long-term solutions be hardware-free would not be inconsistent with a prior Order permitting hardware-based solutions. For example, a Second Order could set a deadline by which operators using hardware-based solutions much transition to hardware-free ones, and impose penalties for failure to timely comply.

cc (via email):

Bill Lake  
Lyle Elder  
Royce Sherlock  
Nancy Murphy  
Michelle Carey  
Alison Neplokh  
Mary Beth Murphy  
Steven Broeckaert  
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## Appendix A

### Outline of Proposed Framework for Basic Tier Encryption Order

1. The prohibition on basic tier encryption shall not apply in systems which:
  - a. comply with the all-digital and transitional relief measures set forth in the NPRM (as modified pursuant to comments in the record<sup>14</sup>), and
  - b. offer a Hardware-Free Solution (“HWFS”).
2. Notwithstanding item 1 above, a cable operator will not be in violation of the prohibition on basic tier encryption for encrypting the basic tier prior to offering an HWFS if it:
  - a. Is actively developing an HWFS which will be available prior to 6/30/2013 (an operator can apply for an extension of this deadline through a waiver-like process by making a showing of active development, and would be subject to penalties if it fails to meet the deadline); and
  - b. Offers E-DTAs on the same terms as the transitional relief measures referenced in item 1.a; *provided* that the operator may begin limited

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<sup>14</sup> Boxee has explained in prior filings that in order to be meaningful, transitional relief must be available to any basic-tier subscriber requesting it during the transition period, not just those using ClearQAM at the time of encryption and requesting relief within 30 days thereof, as was the case with the Cablevision waiver. *See* Letter from Melissa Marks, Boxee, to Marlene H. Dortch, Secretary, FCC, MB. Dkt. 11-169, PP Dkt. 00-67 (Feb. 13, 2012) at 4; Letter from Melissa Marks, General Counsel, Boxee, Inc., to Marlene H. Dortch, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67 (Dec. 21, 2011) at 3. Public Knowledge has noted that criteria used for the Lifeline/Linkup program should be used instead of Medicaid for purposes of determining eligibility for transitional relief of low-income consumers. *See* Letter from Harold Feld, Senior Vice President, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, MB. Dkt. 11-169 (July 27, 2012). These comments could be addressed by revising proposed §76.630 (a)(1) in NPRM with the following:

“(1) This prohibition shall not apply in systems in which:

- (i) no television signals are provided using the NTSC system; and
- (ii) the cable operator offers to any basic tier subscriber the equipment necessary to descramble or decrypt the basic service tier signals (the subscriber’s choice of a set-top box or CableCARD) on up to two separate television sets without charge for two years from the date of encryption of such subscriber’s cable system if such equipment is requested within such time period; and
- (iii) the cable operator offers to any digital subscriber the equipment necessary to descramble or decrypt the basic service tier signals on one television set without charge for one year from the date of encryption of such subscriber’s cable system if such equipment is requested within such time period; and
- (iv) the cable operator offers to all subscribers who meet the eligibility requirements for the Lifeline/Linkup program the equipment necessary to descramble or decrypt the basic service tier signals on up to two separate television sets without charge for five years from the date of encryption of such subscriber’s cable system if such equipment is requested within such time period.



testing of encryption upon the effective date of the Order without offering E-DTAs, but cannot fully encrypt any system until E-DTAs are so offered and must stop all testing and revert to unencrypted delivery if E-DTAs are not so offered by 12/31/12 (or be subject to penalties).

3. As used herein, a Hardware-Free Solution ("HWFS") is:
  - a. any IP-enabled third-party retail device with embedded DTA security; or
  - b. any other solution approved as an HWFS pursuant to the petition process outlined below.
4. Petitions for approval of additional HWFSs must set forth:
  - a. A description of the HWFS including any authentication and other requirements necessary for a third-party device to access the basic tier using such HWFS; and
  - b. An explanation of how the HWFS complies with following requirements necessary to ensure comparable consumer experience to ClearQAM:
    - i. Delivers basic tier programming as it airs (not just as video-on-demand or similar services);
    - ii. Does not require any operator-provided hardware or features implemented in a third-party device on the hardware level;
    - iii. Does not require any delivery, security, or other standards proprietary to or requiring certification by the cable operator;
    - iv. Allows channel discovery and control via an industry-standard protocol that commercially available on non-discriminatory license terms and not proprietary to operator;
    - v. Does not restrict the copying of basic tier content beyond what is currently allowed by FCC regulations for broadcast and unencrypted content; and
    - vi. Is available to all of the operator's basic tier subscribers within an encrypted system who have an internet connection, regardless of whether the cable operator is also such subscriber's internet service provider.
  - c. The Commission may delegate authority to act on such petitions to the Media Bureau, after an expedited notice and comment period (for example, the petition process could be a modified version of the one set forth in 47 CFR §76.1905 for modifying the CCI encoding rules), and the operator shall be able to encrypt in reliance on such HWFS three months following approval of the petition.